

Gauging Gray Leaf Spot

'We're all trying to find the best method of control,' one superintendent says

BY LARRY AYLWARD, MANAGING EDITOR

It's creeping farther North, and Massachusetts superintendent Mike Sosik is preparing for its unwelcome arrival. "It's getting closer," Sosik says of the mysterious gray leaf spot, a perilous turfgrass disease that decimates perennial ryegrass. "I'm getting more concerned."

Gray leaf spot, caused by the fungal pathogen *Pyricularia grisea*, resembles a frightening foe from *The X Files*. You don't know when it might hit. When it does, you might mistake it for something as simple as drought stress or insect damage.

Then, when you discover it is gray leaf spot, it's too late because your fairways are devastated — and you're looking at thousands of dollars in turf repairs.

"People say it won't move this far north," Sosik says of the disease having an impact on his course, Middleton GC, located in northern Massachusetts. "But I don't see it stopping."

Sosik expects gray leaf spot to appear in his area in 2001, and he's already taking precautions. Middleton's tees and fairways are comprised of perennial ryegrass, and Sosik is attempting to convert them to bluegrass. Last spring and fall, he overseeded with a 70 percent bluegrass mix.

"I've always overseeded with ryegrass," Sosik says. "But the best thing is to get away from rye. This is a logical first step for me."

Sosik says he'll consider applying a fungicide later, but he's confident about his overseeding program. "By the time (gray leaf spot) arrives, the tees and fairways will be mostly bluegrass," he says.

Just south of Middleton at Rockrimmon CC in Stamford, Conn., superintendent Tony Girardi discovered gray leaf spot on his course's roughs in early September. Like Sosik, Girardi says he will overseed with bluegrass in the spring.

"This is my first time experiencing it," Girardi says of the



disease. "We're all trying to find the best method of control."

It's spreading

Gray leaf spot has been around for nearly 50 years, diagnosed mostly on warm-season grasses such as St. Augustinegrass and Bermudagrass in the South, says Bruce Clarke, director of the Center for Turfgrass Science at Cook College/Rutgers University in New Brunswick, N.J. It was detected sporadically among northern cool-season grasses in the late '80s and early '90s.

But in 1991, a gray leaf spot outbreak was discovered attacking perennial ryegrass fairways on golf courses in Kansas. Its presence was also reported in Middle Atlantic states. After a period of inactivity from 1992-94, gray leaf reappeared with a vengeance in 1995. "We had a bigger episode ranging from North Carolina up to Kentucky and into New York," Clarke says.

Again, gray leaf spot was fairly inactive in 1996 and 1997, but in 1998 another major outbreak occurred, Clarke says. This time the disease attacked golf courses in states ranging from Georgia to New Hampshire and as far west as the Rocky Mountains.

"Every few years we have an outbreak, and it seems to be getting worse and more widespread," Clarke says. "It's becoming a national problem. We need to get a handle on it if perennial ryegrass is going to be an important component on golf course fairways."

Gray leaf spot usually appears in late July or early August, but it can appear earlier and is more devastating if it does, Clarke notes. "When turf is on the ropes from heat stress, you'll see a lot of the disease," he adds.

Gray leaf spot tends to be a problem on higher cut turf,

Gray leaf spot symptoms include leaf lesions with a tan center and an outer margin of brown.

especially roughs. Symptoms include leaf lesions with a tan center and an outer margin of brown. "It looks a lot like brown patch lesions when you first take a glance at it," Clarke notes.

On cool-season grasses, such as perennial ryegrass, the leaves appear twisted or wilted. This is where gray leaf spot can trick superintendents. "At that stage, it looks a lot like drought stress," Clarke says.

A superintendent, most likely, would then water the grass — but watering only exacerbates the disease, Clarke notes.

"You have to get down on your hands and knees and look for lesions (to identify the disease)," Clarke says.

The leaf lesions become covered with pear-shaped spores causing the blades to take on a gray, felt-like appearance. Hence, the name gray leaf spot.

Gray leaf spot thrives in warm temperatures from 70 to 80 degrees. It also prospers during warm nights.

Combat and control

While there's little research on gray leaf spot control, Clarke says there are management practices that superintendents



A turf consultant inspects a fairway damaged by gray leaf spot.

have used with various degrees of success, such as:

- Avoid excessive nitrogen fertilization, which will intensify the disease.
- Don't water in the evening hours if the disease is active.
- Avoid use of plant growth regulators or herbicides in July and August.
- Mow when turf is dry and remove clippings.

Clarke says fungicides, such as Heritage (from Zeneca Professional Products), 3336 (from Cleary Chemical) and Compass (from Novartis) are also effective when applied in late July or early August.

Girardi says a superintendent's management of gray leaf spot may depend on course location. If you're in the transition zone — where gray leaf spot is most ravaging — you may have to use a regimented chemical spray program to combat it.

But if you're in an area where gray leaf spot is not as much a problem, like Connecticut and the Northeast, you can be prudent with chemical applications and concentrate on overseeding. ■

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